भारतीय मानक
Indian Standard

IS 11059 : 2022

वस्त्रादि मशीनरी एवं सहायकांग — ओपन-एंड कताई मशीनों के लिए बेलनाकार ट्यूब — विशिष्टि

(पहला पुनरीक्षण)

Textile Machinery and Accessories — Cylindrical Tubes for Open-End Spinning — Specification

(First Revision)

ICS 59.120.10

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भारतीय मानक ब्यूरो
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April 2022 **Price Group 2**

Textile Machinery and Accessories Sectional Committee, TXD 14

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Textile Machinery and Accessories Sectional Committee had been approved by the Textiles Division Council.

This standard was originally published in 1984. The first revision has been made in the light of experience gained since its publication and to incorporate the following major changes:

a) Title of the standard has been modified.
b) Additional dimensions of tube have been specified.
c) Marking, packing and sampling clauses have been modified.
d) Reference to Indian standard has been updated.

In formulation of this standard, technical assistance has been derived from ISO 3914-2 : 1994, ‘Textile machinery and accessories — Cylindrical tubes — Part 2: Dimensions, tolerances and designation of tubes for open-end spinning machines.’

The composition of the Committee, responsible for the formulation of this standard is given at Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounding off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILE MACHINERY AND ACCESSORIES — CYLINDRICAL TUBES FOR OPEN-END SPINNING — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements for cylindrical tubes for open-end spinning machines (for example, rotor spinning).

2 REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below:

IS No	*Title*
4905 : 2015	Random sampling and randomization procedures (*first revision*)

3 MANUFACTURE

3.1 Material — The tubes shall be made of paper or polypropylene, or any other material as agreed to between the buyer and the seller.

3.2 Workmanship and Finish — The tubes shall have grooved or embossed finish in case of paper and velveted or flock finish in case of polypropylene. The tube shall have suitable provision for transfer tail. The surface of tube shall be free from sharp edges or burrs.

4 REQUIREMENTS

4.1 Dimensions

The inner diameters and lengths of tubes shall be as given in Fig. 1 and Table 1. The dimensions which are not specified are subject to agreement between the buyer and the seller.

4.1.1 To check the inner diameter of tube, a GO/NOT-GO type gauge shall be used. To control the length of tube within the tolerances specified, a suitable slide gauge shall be used.

4.2 Concentricity

The tubes shall be concentric. However, eccentricity of 0.2 mm at top and bottom of tube shall be permissible.

4.3 Mass

The average mass of tube shall be as agreed to between the buyer and the seller subject to a tolerance of ± 8 percent for paper and ± 2 percent for polypropylene. The mass of tubes is to be determined on a random sample of 100 tubes.

5 MARKING

5.1 Each tube shall be marked with manufacturer's initials or trade-mark, if any.

5.2 Each case/carton of tubes shall also bear the following information:

a) Manufacturer's name, initials or trade-mark, if any;
b) Dimension of tube;
c) Material of tubes;
d) Number of tubes;
e) Gross and net mass;
f) Lot/batch number.
g) Country of origin; and
h) Any other information required by the law in force and/or by the buyer.

5.3 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act,* 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

6 PACKING

A suitable number of cylindrical tubes shall be packed in cases/cartons strong enough to withstand normal hazards of storage and transport. Details of the packing shall be as agreed to between the buyer and the seller. Packaging of the product shall be such as to maintain the integrity of the product throughout its shelf life.

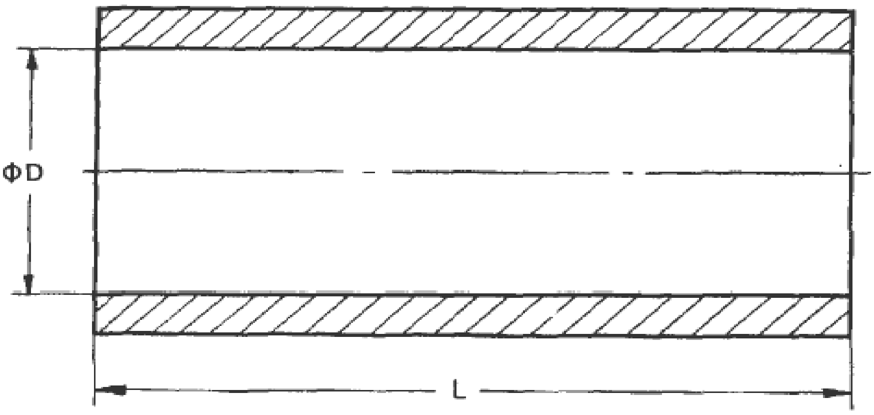

FIG. 1 A TYPICAL CYLINDRICAL TUBE

Table 1 Inner Diameters and Lengths (*mm*)

(*Clause* 4.1)

Sl No.	Inner Diameter (*D*) (*mm*)		Length (*L*) (*mm*)	
	Diameter	Tolerance	Diameter	Tolerance
(1)	(2)	(3)	(4)	(5)
i)	50	± 0.2	98	± 0.5
ii)	54	± 0.2	115 145 170	± 0.5
iii)	56	± 0.2	115 145 170	± 0.5
iv)	63	± 0.2	115 145 170	± 0.5
v)	69	± 0.2	230	± 1
vi)	80	± 0.2	230	± 1

7 SAMPLING AND CRITERIA FOR CONFORMITY

7.1 The quantity of cylindrical tubes manufactured from same material, size and finish supplied to one buyer against one despatch note shall constitute a lot.

7.2 The conformity of the lot to the requirements of this standard shall be determined on the basis of the tests carried out on the samples selected from it.

7.3 Unless otherwise agreed to between the buyer and the seller, the sample shall be selected as prescribed in **7.4** and **7.5**.

7.4 The number of cases to be selected from the lot shall depend on the size of the lot and shall be in accordance with column 1 and column 2 of Table 1.

7.4.1 The cases selected according to **7.4** shall constitute the gross sample.

Table 2 Sample Size and Permissible Number of Non-Conforming Cylindrical Tubes

(*Clauses* 7.4 *and* 7.5)

No. of Cases In the lot	No. of Cases to be Selected (Gross Sample)	No. of Tubes to be Selected for Testing Dimensions	Permissible no. of Non conforming Tubes
(1)	(2)	(3)	(4)
Up to 3	All	100	2
4 to 6	4	125	3
7 to 14	5	200	5
15 and above	10	315	7

7.5 The number of cylindrical tubes to be tested and criterion for conformity for each of the characteristics shall be as follows:

Characteristic	*Numbers of Tubes to be Tested*	*Criterion for Conformity*
Concentricity	200 tubes from the gross sample drawn at random	Non-conforming tubes not to exceed 21
Dimension	*See* column 3 of Table 1	Non-conforming tubes not to exceed the corresponding number given in column 4 of Table 1
Mass	100 tubes drawn from those already tested for dimensions and fit tolerance	The observed value shall satisfy the requirement

NOTE — For the random selection of cylindrical tubes, IS 4905 may be used.

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Textiles Machinery and Accessories, TXD 14

Organization	*Representative(s)*
Central Manufacturing Technology Institute, Bengaluru	Dr Nagahanumaiah (***Chairman***)
Amritlakshmi Machine Works, Mumbai	Shri N. K. Brahmachari Shri N. K. Raut (*Alternate*)
Bhowmick Calculator, Kolkata	Shri Goutam Bhowmick Shri Vivek Bhowmick (*Alternate*)
Bombay Textile Research Association Mumbai	Shri V. A. Gawde Shri R. A. Shaikh (*Alternate*)
Central Institute for Research in Cotton Technology, Mumbai	Dr V. G. Arude Dr T. Senthil Kumar (*Alternate*)
Central Manufacturing Technology Institute, Bengaluru	Shri B. R. Mohanraj Shri K. Saravanan (*Alternate*)
Confederation of Indian Textile Industry, New Delhi	Shri Ajay Kumar
Department of Heavy Industries Government of India, New Delhi	Shri Sushil Lakra
Harish Textile Engineers Pvt Ltd, Mumbai	Shri Itendra H. Shah
HLL Lifecare Limited, Noida	Shri Akhil G. S. Shri Ratnakar Gupta (*Alternate*)
Indian Textile Accessories and Machinery Manufacturers' Association, Mumbai	Shri N. D. Mhatre Shri Chandresh Shah (*Alternate*)
India ITME Society, Mumbai	Shri Prashant Mangukia Ms Seema Srivastava (*Alternate*)
Innovative Electrosoft (I) Pvt Ltd, Pune	Mr Firoz B. Shaikh Ms Prajakta A. Dangat (*Alternate*)
Inspiron Engineering Pvt Ltd, Ahmedabad	Shri Sanjay Kowarkar Shri Pratyush B. Chaukase (*Alternate*)
Kusters Calico Machinery Ltd, Vadodara, Gujrat	Shri Devang Parikh Shri Shubhasis Sur (*Alternate*)
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Laxmi Shuttleless Looms Pvt Ltd, Ahmedabad	Shri Ketan Sanghvi
Man-made Textile Research Association, Surat	Dr S. K. Basu Dr S. Matiz (*Alternate*)
National Safety Council, Mumbai	Shri Lalit R. Gabhane. Shri R. R. Deoghare (*Alternate*)
Office of the Textile Commissioner, Mumbai	Shri C. R. Kalesan Shri Jagram Meena (*Alternate*)
Peass Industrial Engineers Ltd, Mumbai	Shri R. G. Yadav Shri Anthoni L. Francis (*Alternate*)
Textile Machinery Manufacturing Association, Mumbai	Shri M. Shankar Shri Prashant Mangukia (*Alternate*)

Organization	*Representative(s)*
Technocraft Industries India Limited, Mumbai	Shri Ravinder Kumar Shri Anil N. Upadhye (*Alternate*)
The Synthetic and Art Silk Mills Research Association, Mumbai	Dr Manisha Mathu Shri Sanjay Saini (*Alternate*)
The Textile Association (India), Mumbai	Shri J. B. Soma Shri Ashok Juneja (*Alternate*)
Truetzschler India Private Limited, Ahmedabad	Shri Pravin Kandge Shri Shiladitya Joshi (*Alternate*)
Unicef India, New Delhi	Dr Pratibha Singh Mr Yusuf Kabir (*Alternate*)
Veermata Jijabai Technological Institute, Mumbai	Dr Suranjana Gangopadhyay Dr S. P. Barkar (*Alternate*)
BIS Directorate General	Shri J. K. Gupta, Scientist 'E' and Head (TXD) [Representing Director General (*Ex-officio*)]

Member Secretary

Shri Ashwani Kumar
Scientist 'B' (TXD), BIS

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Amend No.	Date of Issue	Text Affected

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